Harding Lawson Associates

Transmittal/Memorandum

91 OCT 32 AM 11:49

STID 4498

To: Susan Hugo
Alameda County Department of Health
80 Swan Way
Room 200
Oakland, California

From: Melissa Wann MLW
Date: October 30, 1991
Subject: USPS Site - Emeryville
Job No.: 05525,072.02

Remarks: Enclosed please find a copy of the Shallow Soils Investigation Report dated September 20, ~~1991~~ 1990 for the property located at 6121 Hollis Street for your review.

As per our telephone conversation of October 28, 1991, HLA and Mr. Ray Jones of the USPS would like to meet with you on November 5, 1991 at 1:30 pm to discuss additional sampling activities, construction of the Postal Service Station, and remedial activities, if appropriate.

If there is a conflict regarding the meeting, please call me at (415) 899-7344.

Harding Lawson Associates
A Subsidiary of Harding Associates

Melissa L. Wann
Project Geologist

Engineering and
Environmental Services

7655 Redwood Blvd., P.O. Box 578
Novato, California 94948
415/899-7344 / 415/892-0821
Telecopy: 415/892-1586

Harding Lawson Associates
A Subsidiary of Harding Associates

R. Bruce Scheibach
Senior Associate Hydrogeologist

Engineering and
Environmental Services

7655 Redwood Blvd., P.O. Box 578
Novato, California 94948
415/899-7319 / 415/892-0821
Telecopy: 415/892-1586

cc: Bruce Scheibach, HLA

MLW/jc20633-misc

September 20, 1990

05525,072.02

United States Postal Service
San Bruno Facility Service Center
850 Cherry Street
San Bruno, California 94099

Attention: Mr. Ray Jones
Design and Construction Branch

Gentlemen:

Shallow Soils Investigation
6121 Hollis Street
Emeryville, California

This report presents the results of a shallow soils investigation conducted by Harding Lawson Associates (HLA) at 6121 Hollis Street, Emeryville, California, for the U.S. Postal Service (USPS). The purpose of this investigation was to assess whether polychlorinated biphenyls (PCBs) are present in shallow onsite soils, and if PCBs were detected, to provide information on cleanup requirements.

SITE DESCRIPTION

The U.S. Postal Service property in Emeryville is situated east of Interstate 80/580, approximately 1 mile north of the Bay Bridge (Plate 1). The site is currently a vacant lot approximately 255 feet by 290 feet. The northern property line is contiguous with 62nd Street. A Southern Pacific Railroad spur is adjacent to the western site border. PCB contamination has been remediated on the property south of the site, which is owned by Westinghouse.

BACKGROUND

Several soil samples collected in the vicinity of the southern site boundary were analyzed for PCBs by the California Department of Health Services (DHS) in February 1981. These samples contained elevated PCB concentrations. This finding prompted ITT Grinnell Corporation, the former owner of the property, to retain CH2M HILL to conduct additional soil sampling and analysis. CH2M HILL's June 1981 report confirmed PCBs to be present in the shallow soil along the southwestern property boundary adjacent to a railroad spur. The sampling locations were not well defined spatially in the DHS or CH2M HILL reports; therefore, the analytical results could not be used to characterize the site.

In 1985, the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) issued Cleanup and Abatement Order No. 85-006 for the Westinghouse property south of the site asserting that Westinghouse took inadequate action to prevent the movement of PCB-contaminated soil offsite. Following negotiations with state and federal regulatory agencies, a continuous 35-foot-deep slurry wall surrounding PCB-contaminated soils was constructed. Soil outside the wall from certain areas along the northern and eastern boundaries of the site having significant (greater than 50 parts per million [ppm]) PCB contamination was excavated and moved within the wall. These soils were later covered with an engineered cap to reduce surface water infiltration and erosion of the soil.

SOILS INVESTIGATION

On August 2 and 3, 1990, 17 shallow soil borings were drilled at the USPS site using a hand auger. Boring locations are shown on Plate 2. Eleven soil borings (1, 2, 5, 6, 7, 9, 11, 12, 14, 16, and 17) were drilled to a depth of 3.5 feet. Soil samples from these borings were collected at intervals from 0.0 to 1.0, 1.2 to 2.0, and 3.0 to 3.5 feet. Five borings (4, 8, 10, 13, and 15) were drilled to a depth of 2 feet or less because rocky soil or concrete was encountered which prohibited further hand augering. One or two soil samples were collected from each of these borings. Boring 3 was abandoned after drilling through asphalt into concrete.

The soil samples collected were submitted under chain of custody to Curtis & Tompkins Analytical Laboratories, Berkeley, for PCB analysis using EPA Test Method 8080. Six soil samples were also analyzed for total petroleum hydrocarbons (TPH) in addition to PCBs because hydrocarbon odors were detected when the boring was completed.

PCB analytical results are presented in Table 1. Table 2 summarizes analytical results for total petroleum hydrocarbons. Laboratory reports for all of the chemical analyses are presented in Appendix A and the field investigation daily reports are presented in Appendix B.

Of the 41 soil samples analyzed for PCBs, only the sample from Boring 15 at a depth between 1.2 and 2.0 feet contained PCBs at a concentration at or above 5,000 micrograms per kilogram (µg/kg) (5 ppm). This sample contained 52,000 µg/kg (52 ppm) PCB. The laboratory was contacted to confirm the concentration reported. A second soil sample from the same sample tube was analyzed; 17,000 µg/kg (17 ppm) of PCBs were detected. The two analyses indicate that PCBs are present; however, the concentrations are not uniform.

The concentrations of PCBs in soil samples collected in the 0- to 1-foot interval are presented on Plate 3. The highest PCB concentration for this depth was 2,100 µg/kg (2.1 ppm) in Boring 10. Plate 4 shows the PCB concentration detected between 1.2 to 2.0 feet below ground surface (bgs); Boring 15 contains the highest level of PCBs

measured onsite, 52,000 μg/kg (52 ppm). Of the 11 soil samples collected from 3.0 to 3.5 feet bgs, only 2 had detectable levels of PCBs (Plate 5).

Three of the six soil samples analyzed for petroleum hydrocarbons had values above the level of detection (Table 2). The 3.0- to 3.5-foot sample from Boring 5 contained 430 milligrams per kilogram (mg/kg, equivalent to ppm) diesel and 51 mg/kg gasoline; the sample from the same depth in Boring 6 contained 260 mg/kg kerosene and 1.2 mg/kg gasoline. The soil sample from Boring 14 at a depth of 0.5 to 1.0 foot had a diesel concentration of 43 mg/kg.

DISPOSAL AND CLEANUP STANDARDS

California and the United States have issued disposal standards for PCBs; and the federal government has also issued cleanup standards for PCB spills.

Disposal Standards

Disposal of wastes containing PCBs is regulated by the federal government under the Toxic Substances Control Act of 1976 (TSCA) and the California government under the Hazardous Waste Management Act of 1986 (HWMA). Nonliquid material contaminated with less than 50 parts per million (ppm) PCBs are not regulated by HWMA; such materials having concentrations above 50 ppm are to be disposed at an EPA-approved land disposal facility, or incinerated.

Cleanup Standards

Federal cleanup standards for PCB spills are presented in 40 CFR 761. The regulatory policy in 40 CFR 761.120(a) establishes criteria the United States Environmental Protection Agency (EPA) is to use to determine the adequacy of the cleanup of a spill resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater. The policy applies to spills that occur after May 4, 1987. Spills that occurred prior to this date are excluded from the scope of this policy for two reasons: 1) this policy is not intended to require additional cleanup where a party has already cleaned a spill in accordance with requirements imposed by EPA through its regional offices; and 2) EPA recognizes that old spills discovered after the effective date of the policy will require site-by-site evaluation because of the likelihood that the site involves more pervasive PCB contamination than fresh spills and because old spills are more difficult to clean up than fresh spills. Therefore, spills that occurred before the effective date of this policy are to be cleaned up to requirements established at the discretion of EPA, usually through its regional offices.

Cleanup standards for outdoor electrical substations are described in 40 CFR 761.125(c)(2); 40 CFR761.125(c)(2)(ii) states that soil contaminated by the spill in an outdoor electrical substation will be cleaned to 25 ppm PCBs by weight, or to 50 ppm PCBs by weight provided that a label or notice is visibly placed in the area. Specific standards for areas with unrestricted access, which include substations that are

converted to another use, are described in 40 CFR 761.125(c)(4), in accordance with 40 CFR 761.125(c)(4)(v). Soils that will remain in place following removal of electrical equipment are to be decontaminated to 10 ppm PCBs by weight provided that the soil is excavated to a minimum depth of 10 inches. The excavation can then be filled with clean soil and restored.

It is believed that the USPS site would be considered an old spill site and would therefore be exempt from the requirements listed in 40 CFR 761.125; however, whether any cleanup is required, or to what level the soil must be cleaned, will require negotiations with the EPA.

TOTAL PETROLEUM HYDROCARBONS

Petroleum odors were detected in three soil borings (5, 6, and 14, Plate 2) and TPH analyses were requested for samples from these borings (Table 2). The laboratory reported that soil samples analyzed from Borings 5 and 6 did have concentrations of TPH as diesel and kerosene in excess of 100 mg/kg. Typically, if soil is found to contain TPH above 100 mg/kg, the regulatory agencies require remediation of the soil. For the USPS site, this would require excavation and disposal of the soil at a Class II landfill or treatment to reduce the concentration below 100 mg/kg, which would allow disposal at a Class III landfill.

Additional subsurface information was obtained from a recent geotechnical investigation conducted by Subsurface Consultants (SC). SC drilled 7 borings, 4 of which were completed to a depth of approximately 25 feet below ground surface to obtain information on the required foundation for the structure to be built. Cuttings from three of these borings were reportedly screened by SC using an organic vapor meter; results indicated that volatile compounds were present in the subsurface. It is known that in this general area of Emeryville there are a considerable number of soil and groundwater contamination problems. The shallow soil samples collected by HLA and the data obtained by Subsurface Consultants, indicates that there is soil contamination present and that groundwater beneath the site may contain volatile organic compounds. Further definition of the identified soil contamination and assessment of the possible groundwater contamination will have to be addressed under another work authorization.

RECOMMENDATIONS

The data obtained from shallow soil sampling conducted by HLA indicates that PCBs are present in the soils at the facility, principally in the southern half of the property and generally at concentrations below 5,000 µg/kg (5 ppm). At this concentration the site would be suitable for nonrestricted use, assuming the areas where PCBs were detected are covered with asphalt or the proposed postal facility building. One soil sample analyzed from Boring 15 did indicate that PCBs were present at 52 ppm at a depth of 1.5 to 2.0 feet. Soil at this high concentration may require excavation and

disposal at an offsite landfill. The EPA will need to be contacted to obtain guidance to assess whether any action needs to be taken for this one area.

The TPH detected in the soil will require some form of remediation. Again the local regulatory agencies will need to be contacted and a negotiated disposition of the soil will be required.

The above mentioned environmental problems must be addressed prior to construction of the U.S. Postal Service facility planned for the site. If you have any questions, please feel free to contact Bruce Scheibach at 899-7319.

Yours very truly,

HARDING LAWSON ASSOCIATES

Robert W. Hull
Senior Associate Hydrogeologist

R. Bruce Scheibach
Senior Associate Hydrogeologist

EGH/RBS/bag/J13333-H

Attachments:	Table 1	Analytical Results for Polychlorinated Biphenyls
	Table 2	Analytical Results for Total Petroleum Hydrocarbons
	Plate 1	Site Location Map
	Plate 2	Boring Location Map
	Plate 3	PCB Concentrations Between 0.0 and 1.0 foot bgs
	Plate 4	PCB Concentrations Between 1.2 and 2.0 feet bgs
	Plate 5	PCB Concentrations Between 3.0 and 3.5 feet bgs
	Appendix A	Analytical Results
	Appendix B	Field Investigation Daily Reports

Table 1. Analytical Results for Polychlorinated Biphenyls Analyses (EPA Method 8080)

Boring Number	Depth of Sample (ft bgs)[1]	PCB[2] Concentration (µg/kg) µg/g
1	0.5-1.0	[3]ND (<28)
1	1.2-1.7	ND (<28)
1	3.0-3.5	ND (<28)
2	0.0-0.5	320
2	1.5-2.0	ND (<28)
2	3.0-3.5	66
4	0.3-0.8	ND (<28)
4	1.3-1.8	ND (<28)
5	0.4-0.9	ND (<28)
5	1.5-2.0	ND (<28)
5	3.0-3.5	ND (<28)
6	0.0-0.5	120
6	1.5-2.0	ND (<28)
6	3.0-3.5	ND (<28)
7	0.0-0.5	56
7	1.5-2.0	ND (<28)
7	3.0-3.5	ND (<28)
8	0.0-0.5	380
9	0.0-0.5	1,900
9	1.5-2.0	64
9	3.0-3.5	ND (<28)
10	0.0-0.5	2,100
10	1.5-2.0	2,000
11	0.0-0.5	300
11	1.5-2.0	120
11	3.0-3.5	ND (<28)
12	0.0-0.5	68
12	1.5-2.0	ND (<28)
12	3.0-3.5	ND (<28)

[1] ft bgs = feet below ground surface
[2] PCB as Aroclor 1260
[3] ND = Not detected at or above reporting limits, shown in parentheses.

Table 1. Analytical Results for Polychlorinated Biphenyls Analyses (EPA Method 8080) (Continued)

Boring Number	Depth of Sample (ft bgs)	PCB Concentration (µg/kg)
13	0.0-0.5	290
14	0.5-1.0	410
14	1.5-2.0	360
14	3.0-3.5	ND (<28)
15	0.3-0.8	29
15	1.5-2.0	52,000/17,000*
16	0.3-0.8	100
16	1.5-2.0	ND (<28)
16	3.0-3.5	ND (<28)
17	0.3-0.8	ND (<28)
17	1.5-2.0	24**
17	3.0-3.5	21**

* Split Sample
** Concentration reported is below the reporting limit

BS:lb/BS-1/4-A

Table 2. Analytical Results for Total Petroleum Hydrocarbons (CA DHS Method)

Boring Number	Depth of Sample (ft bgs)[1]	TPH[2] as kerosene (mg/kg)[3]	TPH as Diesel (mg/kg)	TPH as Gasoline (mg/kg)
5	1.5-2.0	ND [4]	ND	ND
5	3.0-3.5	ND	430	51
6	3.0-3.5	260	ND	1.2
14	0.5-1.0	ND	43	ND
14	1.5-2.0	ND	ND	ND
14	3.0-3.5	ND	ND	ND

1 ft bgs feet below ground surface
2 TPH total petroleum hydrocarbons
3 mg/kg milligrams per kilogram is equivalent to parts per million
4 ND not detected at or above the reporting limit

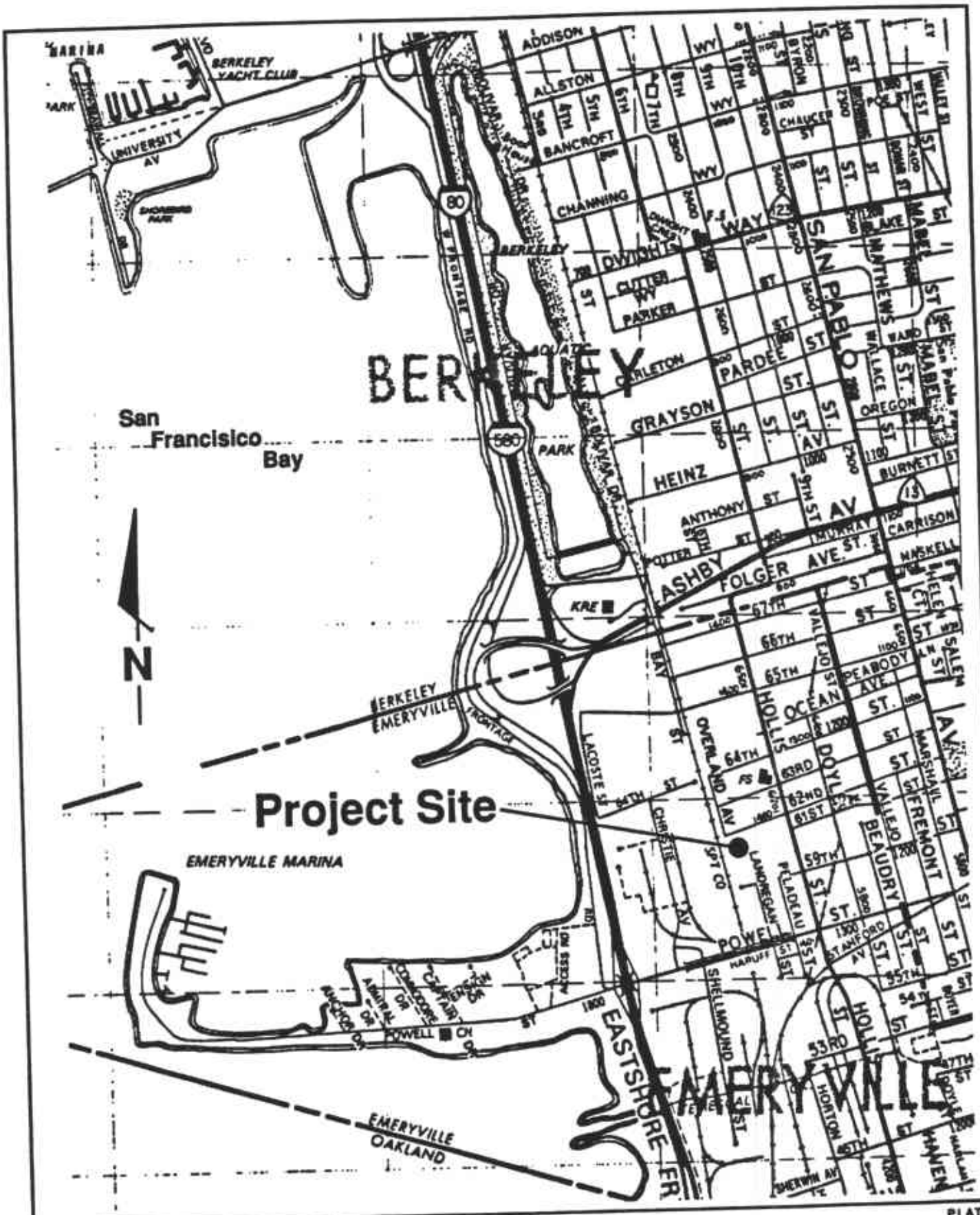
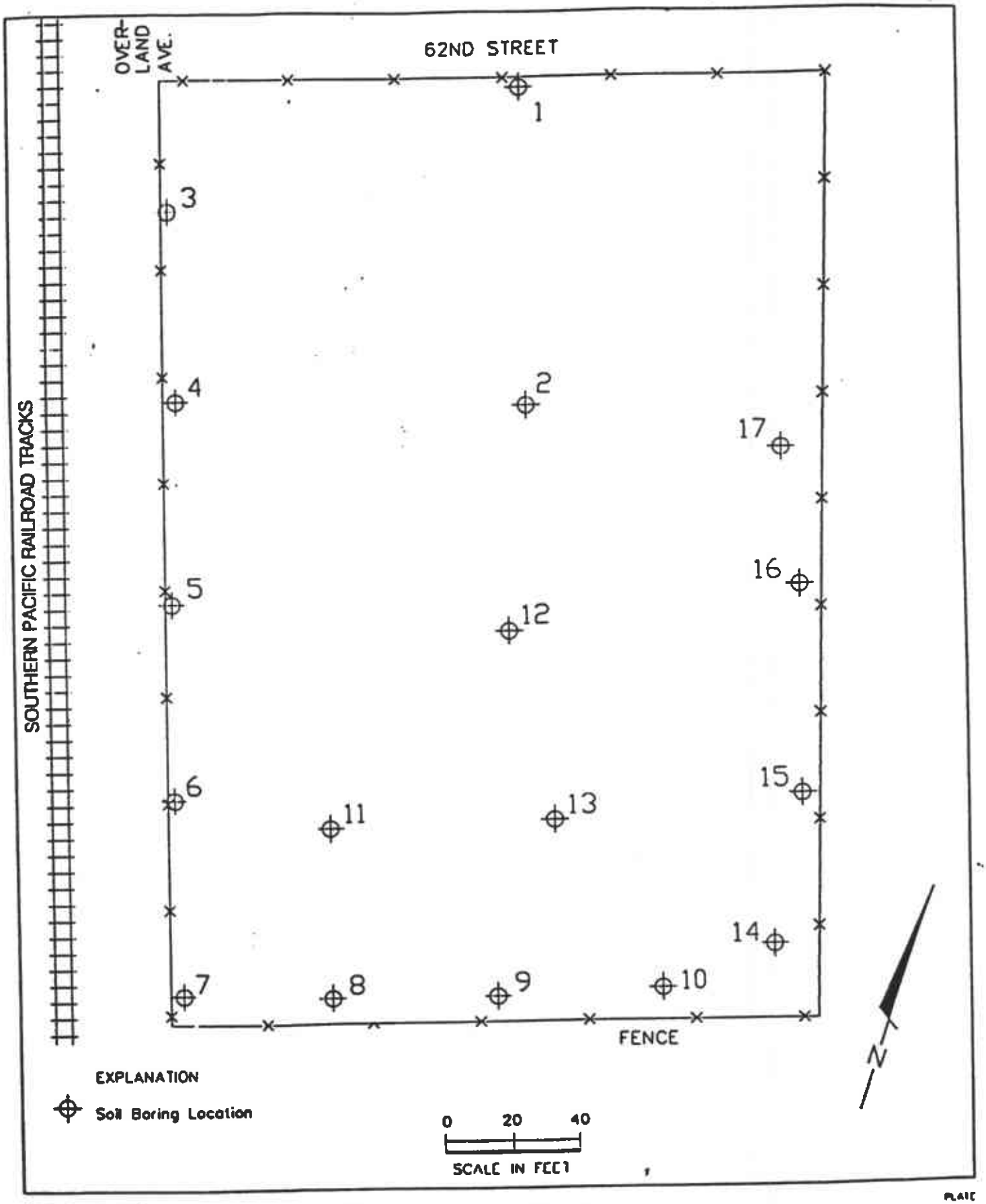


PLATE **1**

Site Location Map
U.S. Postal Service
6121 Hollis Street
Emeryville, California

Harding Lawson Associates
Engineering and Environmental Services

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
DLFc	05525,072.02	RBB	9/90	

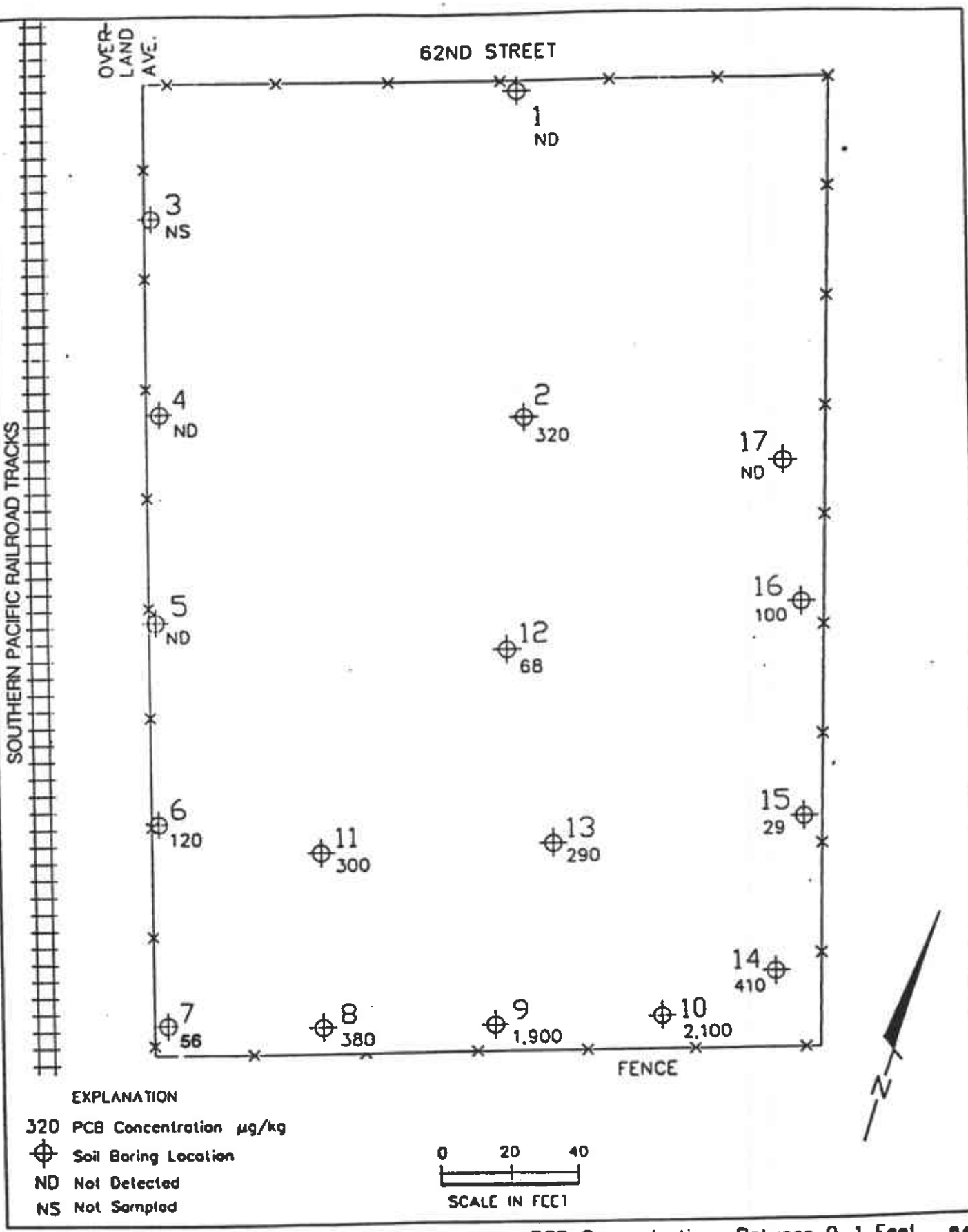


Harding Lawson Associates
Engineering and Environmental Services

Site Map
U.S. Postal Service
Emeryville, California

PLATE 2

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LZ	5525,072.02	RBS	8/90	

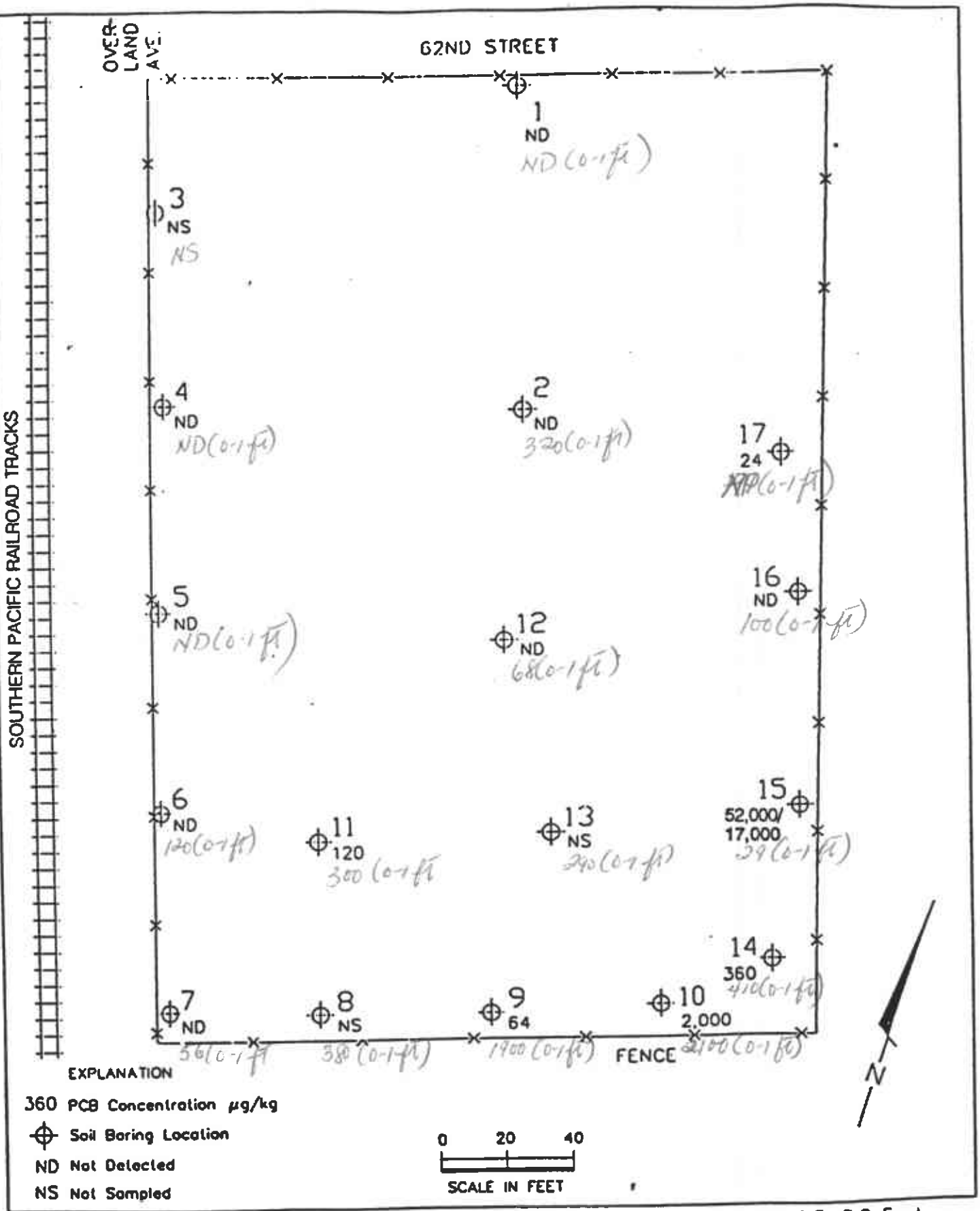


Harding Lawson Associates
Engineering and Environmental Services

PCB Concentrations Between 0–1 Feet Below Ground Surface
U.S. Postal Service
Emeryville, California

PLATE 3

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LZ	5525,072.02		8/90	

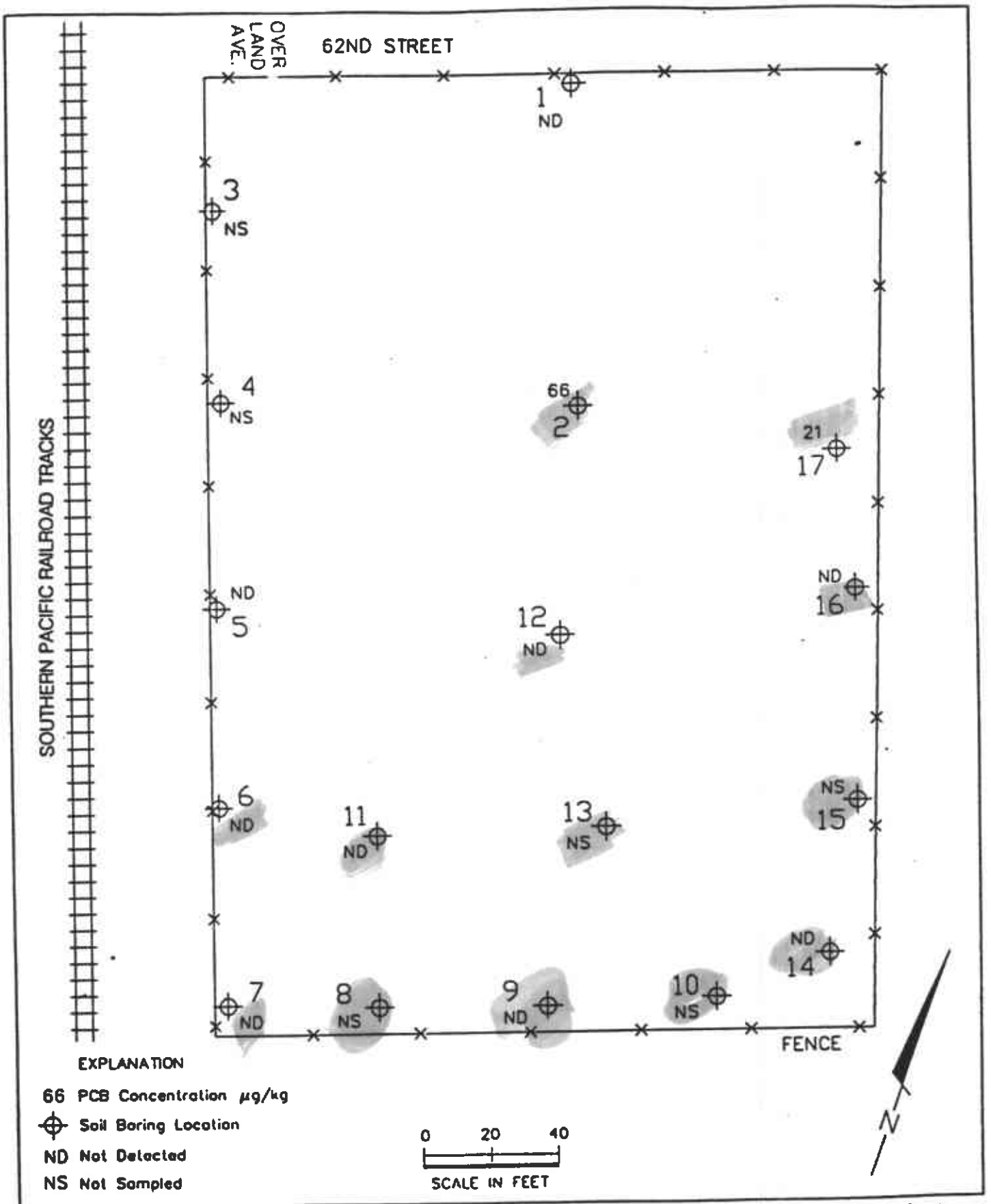


Harding Lawson Associates
Engineering and Environmental Services

PCB Concentration Between 1.2–2.0 Feet Below Ground Surface
U.S. Postal Service
Emeryville, California

PLATE 4

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LZ	5525,072.02	RCB	8/90	



Harding Lawson Associates
Engineering and
Environmental Services

PCB Concentrations Between 3.0–3.5 Feet Below Ground Surface
U.S. Postal Service
Emeryville, California

PLATE 5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LZ	5525,072.02	RBB	8/90	

Curtis & Tompkins, Ltd., Analytical Laboratories Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/03/90
DATE REPORTED: 08/10/90

LAB NUMBER: 101284

CLIENT: HARDING LAWSON ASSOCIATES

REPORT ON: 20 SOIL SAMPLES

PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SRVICE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-1
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310001
BORING #1 Depth = 0.5-1.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-2
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310002
BORING #1 Depth = 1.2 - 1.7'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-3
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310003
Bonny #1 Depth = 3.0-35'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-4
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310004
BORING #2 Depth = 0 - 0.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	320	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-5
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310005
BORING #2 DEPTH = 1.5-2.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-6
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310006
BORING #2 DEPTH = 3-3.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	66	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-7
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310007
BORING #4 Depth = 0.3-0.8'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-8
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310008
BORING #4 DEPTH=1.3-1.9'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-9
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310009

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

BORING # 5 Depth = 0.4 - 0.9'

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-10
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310010
Boring #5 Depth = 1.5-2.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-11
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310011
BORING #5, Depth = 3.0-3.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-12
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310012

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

BORING #6, Depth = 0-0.5'

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	120	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-13
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310013
BORING #6 Depth = 1.5-2.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-14
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310014
BORING #6, Depth: 3.0-3.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-15
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310015
BORING #7 0-0.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	56	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-16
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310016
BORING #7 1.5-2.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-17
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310017
BORING #7 Depth 3-35'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-18
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310018
BORING #9 0-0.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	380	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-19
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310019
BORING #9 Depth = 0-0.5'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	275
AROCLOR 1232	ND	275
AROCLOR 1016	ND	275
AROCLOR 1242	ND	275
AROCLOR 1248	ND	275
AROCLOR 1254	ND	275
AROCLOR 1260	1,900	275

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LAB NUMBER: 101284-20
CLIENT: HARDING LAWSON ASOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310020
Boring #9 Depth=1.5-2.0'

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/10/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	64	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	90

HLA
200 Rush Landing Road
P.O. Box 6107
Novato, California 94948
415/892-0821
Telecopy: 415/892-1589

10724

CHAIN OF CUSTODY FORM

Lab: Curtis & Tompkins

Samplers: Gary D. Thomas/Jim W. Anderson

Job Number: 05525.072.02

Name/Location: U.S. Postal Service

Project Manager: Liz Hagen

Recorder: Gary D. Thomas (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr Wk Seq	DATE: Yr Mo Dy Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	EPA 8080 analysis for PCBs only + pesticides
50			x		1			903101 0001	900802 0945									x
50			x		1			903101 0002	900802 1000									x
50			x		1			903101 0003	900802 1007									x
50			x		1			903101 0004	900802 1018									x
50			x		1			903101 0005	900802 1026									x
50			x		1			903101 0006	900802 1038									x
50			x		1			903101 0007	900802 1338									x
50			x		1			903101 0008	900802 1401									x
50			x		1			903101 0009	900802 1449									x
50			x		1			903101 0010	900802 1458									x

LAB NUMBER: Yr Wk Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Gary D. Thomas	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 9/3/90 9:45
METHOD OF SHIPMENT: Ice Chest with Blue Ice		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

[redacted]
1655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: 415/892-0831
Telex: 340523

101284

CHAIN OF CUSTODY FORM

Lab: Curtis & Tompkins

Samplers: Gary D. Thomas/Jim W. Anderson

Job Number: 05525.072.02

Name/Location: U.S. Postal Service

Project Manager: Liz Hagen

Recorder: Gary D. Thomas
(Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	EPA 8080, analyze for PCB's only, no pesticides
50			X		1			90310011			900802			1508									X
50			X		1			90310012			900802			1518									X
50			X		1			90310013			900802			1529									X
50			X		1			90310014			900802			1542									X
50			X		1			90310015			900802			1555									X
50			X		1			90310016			900802			1603									X
50			X		1			90310017			900802			1616									X
50			X		1			90310018			900802			1658									X
50			X		1			90310019			900802			1744									X
50			X		1			90310020			900802			1758									X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Gary D. Thomas	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) [illegible]	DATE/TIME 9/3/82 9:45

METHOD OF SHIPMENT: Ice Chest with Blue Ice

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878.
2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 08/03/90
DATE REPORTED: 08/15/90

LAB NUMBER: 101294

CLIENT: HARDING LAWSON ASSOCIATES

REPORT ON: 21 SOIL SAMPLES & 1 WATER SAMPLE

PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-1
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310021
Boring 9 3-3.5 feet

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-2
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310022
BORING 10 0-0.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	280
AROCLOR 1232	ND	280
AROCLOR 1016	ND	280
AROCLOR 1242	ND	280
AROCLOR 1248	ND	280
AROCLOR 1254	ND	280
AROCLOR 1260	2,100	280

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-3
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310023
Boring #10 1.5-2 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	280
AROCLOR 1232	ND	280
AROCLOR 1016	ND	280
AROCLOR 1242	ND	280
AROCLOR 1248	ND	280
AROCLOR 1254	ND	280
AROCLOR 1260	2,000	280

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-4
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310024
BORING #11 0-0.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	300	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-5
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310025
Boring #11 1.5-2 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	120	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-6
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310026
Boring #11 3-3.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-7
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310027
BORING #12 0-0.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	68	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-8
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310028
Boring #12 1.5-2 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-9
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310029
Boring #12 3-3.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-10
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310030
Boring #13 0.0-0.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	290	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-11
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310031
Boring #14 0.5-1 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	410	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-12
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310032
BORING #14 1.5-2 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/09/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	360	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-13
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310033
BORING #14 3-3.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-15
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310035
Boring #15 1.5-2 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	5500
AROCLOR 1232	ND	5500
AROCLOR 1016	ND	5500
AROCLOR 1242	ND	5500
AROCLOR 1248	ND	5500
AROCLOR 1254	ND	5500
AROCLOR 1260	52,000	5500

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101506-1
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310035
BORING #15 1.5-2 FEET REPLICATE SAMPLE

DATE RECEIVED: 08/03/90
DATE REQUESTED: 08/28/90
DATE ANALYZED: 08/29/90
DATE REPORTED: 08/30/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	1400
AROCLOR 1232	ND	1400
AROCLOR 1016	ND	1400
AROCLOR 1242	ND	1400
AROCLOR 1248	ND	1400
AROCLOR 1254	ND	1400
AROCLOR 1260	17,000	1400

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	87

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-16
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310036
BORING #16 0.3-0.8 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	100	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-17
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310037
BORING #16 10.5-12 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-18
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310038
Boring F16 3.0-3.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-19
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310039
Boring #17 0.3-0.8 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	ND	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-20
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310040
BORING #17 1.5-2.0 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	DETECTED(24)	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-21
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310041
BORING #17 3.0-3.5 FEET

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)
AROCLOR 1221	ND	28
AROCLOR 1232	ND	28
AROCLOR 1016	ND	28
AROCLOR 1242	ND	28
AROCLOR 1248	ND	28
AROCLOR 1254	ND	28
AROCLOR 1260	DETECTED(21)	28

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	100

Curtis & Tompkins, Ltd.

LAB NUMBER: 101294-22
CLIENT: HARDING LAWSON ASSOCIATES
PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE
SAMPLE ID: 90310042
RISE WATER SAMPLE

DATE RECEIVED: 08/03/90
DATE ANALYZED: 08/10/90
DATE REPORTED: 08/15/90

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3550

AROCLOR TYPE	RESULT (ug/L)	REPORTING LIMIT (ug/L)
AROCLOR 1221	ND	1.0
AROCLOR 1232	ND	1.0
AROCLOR 1016	ND	1.0
AROCLOR 1242	ND	1.0
AROCLOR 1248	ND	1.0
AROCLOR 1254	ND	1.0
AROCLOR 1260	ND	1.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	102

[redacted]

HLA
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: 415/892-0831
Telex: 340523

101294

CHAIN OF CUSTODY FORM

Lab: Curtis & Tompkins

Samplers: Gary D. Thomas/Jim W. Anderson

Job Number: 05525,072.02

Name/Location: U.S. Postal Service

Project Manager: Liz Hagen

Recorder: Gary D. Thomas (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 8080, analyze for PCB's only, no Pesticides
50			X		1			90	31	0021	90	08	02	1811	1	X
50			X		1			90	31	0022	90	08	02	1828	2	X
50			X		1			90	31	0023	90	08	02	1843	3	X
50			X		1			90	31	0024	90	08	03	1048	4	X
50			X		1			90	31	0025	90	08	03	1112	5	X
50			X		1			90	31	0026	90	08	03	1125	6	X
50			X		1			90	31	0027	90	08	03	1203	7	X
50			X		1			90	31	0028	90	08	03	1215	8	X
50			X		1			90	31	0029	90	08	03	1225	9	X
50			X		1			90	31	0030	90	08	03	1246	10	X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Gary D. Thomas		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 4/30 1500

METHOD OF SHIPMENT: Ice Chest with Blue Ice

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Harding Lawson Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: 415/892-0831
Telex: 340523

101294

CHAIN OF CUSTODY FORM

Lab: Curtis & Tompkins

Samplers: Gary D. Thomas

Job Number: 05525,072.02

Name/Location: U.S. Postal Service

Project Manager: Liz Hagen

Recorder: Gary D. Thomas (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr Wk Seq	DATE: Yr Mo Dy Time	STATION DESCRIPTION/ NOTES
SO			X		1			90 31 0031	90 08 03 1350	11
SO			X		1			90 31 0032	90 08 03 1405	12
SO			X		1			90 31 0033	90 08 03 1420	13
SO			X		1			90 31 0034	90 08 03 1455	14
SO			X		1			90 31 0035	90 08 03 1503	15
SO			X		1			90 31 0036	90 08 03 1537	16
SO			X		1			90 31 0037	90 08 03 1544	17
SO			X		1			90 31 0038	90 08 03 1553	18
SO			X		1			90 31 0039	90 08 03 1607	19
SO			X		1			90 31 0040	90 08 03 1620	20

ANALYSIS REQUESTED

EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	EPA 8080, analyze for PCB's only, no pesticides
							X
							X
							X
							X
							X
							X
							X
							X
							X
							X

LAB NUMBER: Yr Wk Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Gary D. Thomas	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 4/10 500
METHOD OF SHIPMENT: Ice Chest with Blue Ice		

6533

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

[redacted] Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821
Telecopy: 415/892-0831
Telex: 340523

101294

CHAIN OF CUSTODY FORM

Lab: Curtis & Tompkins

Samplers: Gary D. Thomas

Job Number: 0.5525,072.02

Name/Location: U.S. Postal Service

Project Manager: Liz Hagen

Recorder: Gary D. Thomas
(Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	EPA 8080 analyze for PCBs only, no pesticides
50			X		1			90	31	0041	90	08	03	1632	21							X	
20	X				1			90	31	0042	90	08	03	1640	22							X	

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Gary D. Thomas		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
	[redacted]	5007

METHOD OF SHIPMENT: Ice Chest with Blue Ice

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878 1990
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/03/90
DATE REPORTED: 08/20/90

LAB NUMBER: 101313

CLIENT: HARDING LAWSON ASSOCIATES

REPORT ON: 6 SOIL SAMPLES

PROJECT #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 101313
CLIENT: HARDING LAWSON ASSOCIATES
JOB #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE

DATE RECEIVED: 08/03/90
DATE REQUESTED: 08/07/90
DATE ANALYZED: 08/15/90
DATE REPORTED: 08/20/90

Total Volatile Hydrocarbons as Gasoline in Solis & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)
101313-1	90310010	ND	1.0
101313-2	90310011	51	1.0
101313-3	90310014	1.2	1.0
101313-4	90310031	ND	1.0
101313-5	90310032	ND	1.0
101313-6	90310033	ND	1.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	112

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 101313
CLIENT: HARDING LAWSON ASSOCIATES
JOB #: 05525,072.02
LOCATION: U.S. POSTAL SERVICE

DATE RECEIVED: 08/03/90
DATE REQUESTED: 08/07/90
DATE EXTRACTED: 08/08/90
DATE ANALYZED: 08/08/90
DATE REPORTED: 08/20/90

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT (mg/Kg)
101313-1	90310010	ND	ND	10
101313-2	90310011	ND	430	10
101313-3	90310014	260	ND	10
101313-4	90310031	ND	43	10
101313-5	90310032	ND	ND	10
101313-6	90310033	ND	ND	10

ND = Not Detected at or above reporting limit.

Appendix B

FIELD INVESTIGATION DAILY REPORTS

Project: U.S. Postal Service — Job No.: 05525,072.02
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 8-2-90
Equipment Rental: _____ Company: _____ — To: Liz Hagen
Equipment Hours: _____ F.E. Time from: _____ to: _____ — By: Gary Thomas/Jim Anderson

(outside service and expense record must be attached for any outside costs)

6:35 Arrive at HLA Novato office. Will get all equip. need to do work today. Need to get hand augering equipe, D.I. water, 55 gallon drums to store water used during decon. etc.

7:15 Have gather up equip., now going to Big 4 Rents to get coring machine.

7:35 Got coring machine, but need to go back to HLA Novato office to get a generator to run corer.

8:00 Got generator, now departing for site

8:50 Arrive at site, will prepare for work. JWA has not arrived yet because he's going by lab to pick-up bottles needed to sample decon. water. GDT will make-up labels while waiting for JWA

9:10 JWA arrives, we'll now locate first boring and then set-up equip. for sampling

9:15 First boring is on asphalt, so will have to core.

9:25 Begin coring

9:42 Have cored through asphalt, now cleaning augers with a Alconox soap-D.I. water solution and after cleaning will rinse augers with D.I. water

9:50 Begin collecting sample from boring #1

Sample #	Depth (ft.)	Time
90310001	0.5 - 1	9:55
90310002	1.2 - 1.7	10:00
90310003	3 - 3.5	10:07

Attachments:

Initial GDT

Sheet 2 of 6

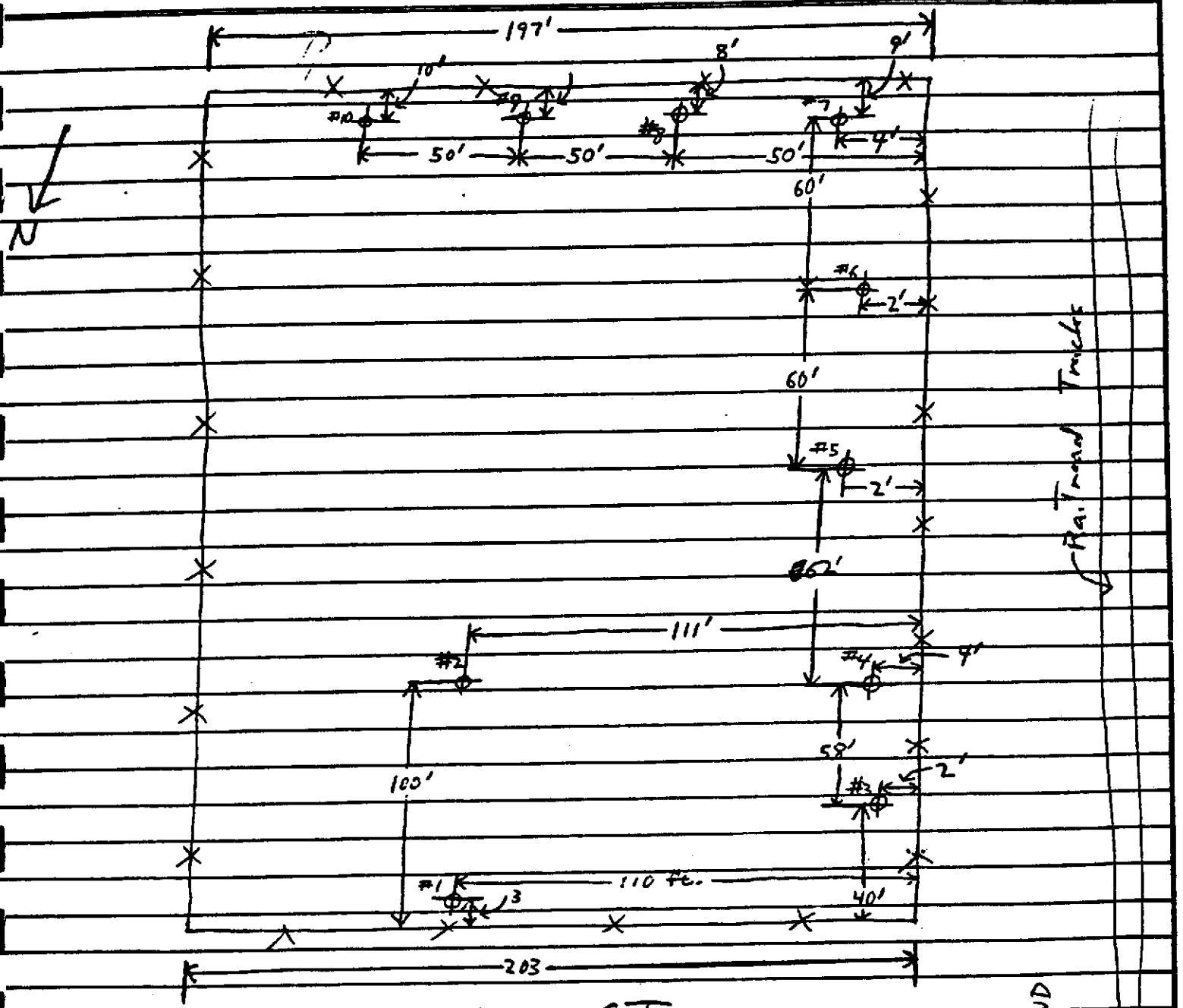
Project: U.S. Postal Service — Job No.: 05525.072.02

Subject: FIELD INVESTIGATION DAILY REPORT — Date: 8-2-90

Equipment Rental: _____ Company: _____ — To: Liz Hagen

Equipment Hours: _____ F.E. Time from: _____ to: _____ — By: Gary Thomas/Jim Anderson

(outside service and expense record must be attached for any outside costs)



Attachments:

Initial

Harding Lawson Associates

Project: U.S. Postal Service
Job No.: 05525.072.02
Subject: FIELD INVESTIGATION DAILY REPORT
Date: 8-2-90
Equipment Rental: _____ Company: _____
To: Liz Hagen
Equipment Hours: _____ F.E. Time from: _____ to: _____
By: Gary Thomas/Jim Anderson

(outside service and expense record must be attached for any outside costs)

10:15 Begin coring boring #2, no asphalt, did not use cleaned augers as described earlier.

Sample #	Depth (ft.)	Time
90310004	0 - .5	10:18
90310005	1.5 - 2	10:26
90310006	3 - 3.5	10:38

10:55 Begin coring through asphalt on boring #3

11:04 Completed coring through asphalt, now preparing for sampling. Cleaning augers as described earlier

11:08 Begin sampling boring #3

Sample #	Depth	Time

11:13 There's another layer below what we just cored through so we have to core again, this may be concrete

11:52 Drilled down to a total depth of 10" and had still not gotten through layer below, so we're going to move to next boring. Layer below is probably concrete, hit it at 5.5" BGS. Moved approx. 1.5 ft. away from fence and hit concrete in 2nd hole.

12:05 Taking Lunch

13:05 Return from lunch

Attachments:

Initial GDT

Project: U.S. Postal Service — Job No.: 05525,072.02
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 8-2-90
Equipment Rental: _____ Company: _____ — To: Liz Hagen
Equipment Hours: _____ F.E. Time from: _____ to: _____ — By: Gary Thomas/Jim Anderson

(outside service and expense record must be attached for any outside costs)

13:20 Begin coring through asphalt on boring #4

13:27 Cored through asphalt, approx.

13:35 Begin sampling boring #4. Samples (Augers) have been cleaned as described earlier

Sample #	Depth (ft.)	Time
90310007	0.3 - 0.8	13:38
90310008	1.3 - 1.8	14:01

14:10 Not able to collect a sample at the 3 ft. (from boring #4) interval because we hit a boulder or cobble at approx. 2 ft. and were not able to auger past it.

14:20 Begin ~~auger~~ GDT coring through asphalt on boring #5

14:37 Cored through asphalt on boring #5

14:43 Begin sampling boring #5. Samplers (Augers) have been cleaned as described earlier

Sample #	Depth (ft.)	Time	Comments
90310009	.4 - .9	14:49	
90310010	1.5 - 2	14:58	has hydrocarbon smell
90310011	3 - 3.5	15:08	has strong hydrocarbon smell

15:14 Begin sampling boring #6. Samplers (Augers) has been cleaned as described earlier

Sample #	Depth (ft.)	Time	Comments
90310012	0 - .5	15:18	
90310013	1.5 - 2	15:29	
90310014	3 - 3.5	15:42	Strong hydrocarbon smell

Attachments:

Initial GDT

Project: U.S. Postal Service — Job No.: 05525,072.02
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 8-2-90
Equipment Rental: _____ Company: _____ — To: Liz Hagen
Equipment Hours: _____ F.E. Time from: _____ to: _____ — By: Gary Thomas/Jim Anderson

(outside service and expense record must be attached for any outside costs)

15:46 Begin sampling boring #7. Samplers (Augers) have been cleaned as described previously

	Sample #	Depth (ft.)	Time
15:48 GDT	90310015	0 - .5	15:55
	90310016	1.5 - 2	16:03
	90310017	3 - 3.5	16:16

16:25 East - West running fence at both ends of property are not the lengths shown on site map. Fence at North end of property measures 303 ft., not 264 ft. as shown on map. Fence at south end of property measure 197 ft., not 231 ft. as shown on map. Will adjust locations of boring because of this. See map in note for locations of boring relative to fence.

16:30 Begin sampling boring #8. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth	Time	Comments
90310018	0 - .5	16:58	Very gravelly

17:35 Could not get past 2 ft. in boring #8 because soil is very rocky. Only got surface sample. Attempted 3 different holes and all were rocky

17:40 Begin sampling boring #9. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth (ft.)	Time
90310019	0 - .5'	17:44
90310020	1.5 - 2	17:59
90310021	3 - 3.5	18:11

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18:20 Begin sampling boring #10, Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth (ft.)	Time	Comments
90310022	0-.5	18:28	gravelly soil
90310023	1.5-2	18:43	

17:57 Not able to get past 2 ft., soil is too rocky. No sample collected from 3-3.5 ft. in boring #10

19:00 Cleaning-up augering equip., will not be able to sample all borings today. Will have to sample borings another day. After cleaning-up equip. we'll core through the asphalt in the remaining borings

19:05 Begin coring asphalt, we have 4 cores to do

20:30 Finished coring, now going by lab to see if anyone is there to drop off samples to

20:41 Nobody is at lab, will have deliver samples tomorrow. Now departing for HLA Novato office

21:20 Arrive back at HLA Novato office. Need to unload some equip.

Attachments:

Initial GDT

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Equipment Rental: ______ Company: ______ To: Liz Hagen
Equipment Hours: ______ F.E. Time from: ______ to: ______ By: Gary Thomas

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9:15 Leaving HLA Novato office for site. Will stop by lab on way to drop-off samples collected last night and to pick up bottle to sample decon. water for PCB's

9:50 Arrive at lab to drop-off samples

10:05 Arrive at site. Will make up labels for samples and then clean sampling equip. (augers) with a labtere soap - D.I. water solution and then rinse samplers with D.I. water

10:40 Begin sampling boring #11

Sample #	Depth	Time	
90310024	0.0-.5	10:48	Yellowish brown silty sand with gravel (SM) (GM)→.3 to 1.5' silty gravel with sand (difficult to auger through)
90310025	1.5-2	11:12	(SM)→Dark brown silty sand with gravel
90310026	3-3.5	11:25	Brown silty sand with gravel (SM)

11:50 Begin sampling boring #12. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth	Time	
90310027	0-.5	12:03	Grayish brown silty sand with gravel (SM)
90310028	1.5-2	12:15	Dark brown silt with sand (ML), trace gravel
90310029	3-3.5	12:25	Brown silty Sand with Gravel (SM)

12:40 Begin sampling boring #13. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth	Time	
90310030	0-.5	12:46	Grayish brown silty Gravel with sand (GM)

13:25 Not able to get past 1.3 ft. in boring #13 so did not collect samples at 1.5 and 3 ft. Soil is too gravelly

Attachments:

Initial GDT

Sheet 2 of 4

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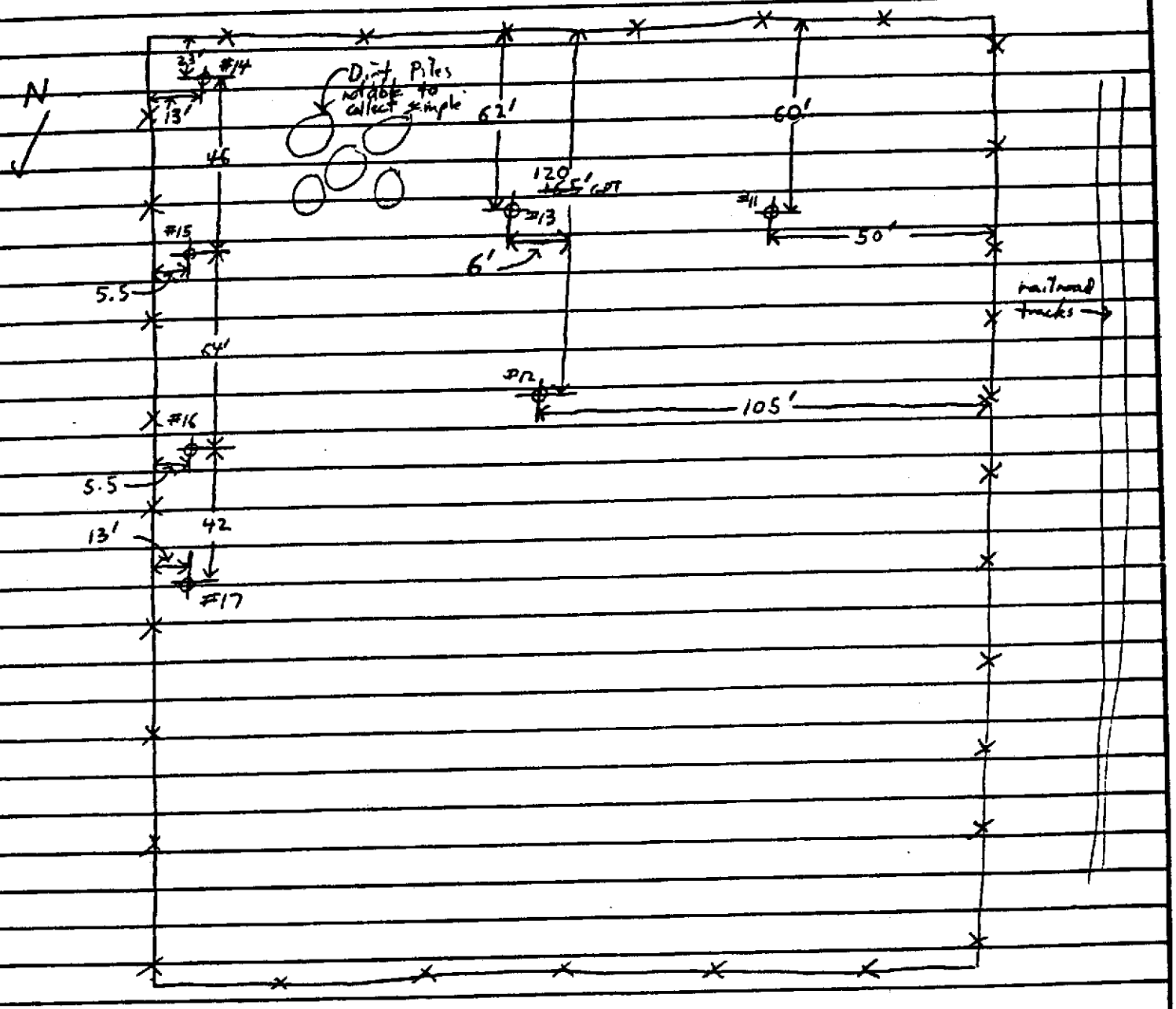
Job No.: 05525.072.02
Date: 8-3-90
To: Liz Hagen
By: Gary Thomas

(outside service and expense record must be attached for any outside costs)



62 NN ST.

Attachments:

Initial GDT

Project: U.S. Postal Service — Job No.: 05525.072.02
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13:45 Begin sampling boring #14. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth (ft.)	Time	
90310031	.5-1	13:50	Olive well-graded gravelly sand with silt and gravel (SW-SM)
			1-1.5' Dark brown clayey silt with sand (CL/ML), trace oyster shells, smells of hydrocarbons
90310032	1.5-2	14:05	1.5-2 Greenish gray fat clay (CH) slight hydrocarbon smell
90310033	3-3.5	14:20	2-3.5 Dark brown to black clayey silt (CL/ML) smells of hydrocarbons

14:45 Begin sampling boring #15. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth (ft.)	Time	
90310034	.3-.8	14:55	Olive well-graded sand with silt and gravel (SW-SM)
90310035	1.5-2	15:03	Dark brown clayey silt with sand (CL/ML)

15:13 Not able to auger past 2 ft in boring #15, so did not collect a sample at 3 ft.

15:30 Begin boring #16. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth (ft.)	Time	
90310036	.3-.8	15:37	Olive well graded sand with silt and gravel (SW-SM)
90310037	1.5-2	15:44	Dark brown clayey silt with sand (CL/ML)
90310038	3-3.5	15:53	Olive brown fat clay with sand (CH)

16:02 Begin sampling boring #17. Samplers (Augers) have been cleaned as described earlier.

Sample #	Depth	Time	
90310039	.3-.8	16:07	Olive well graded sand with silt and gravel (SW-SM)
90310040	1.5-2	16:20	Brown silty sand (SM)
90310041	3-3.5	16:32	Olive brown fat clay with sand (CH)

Attachments:

Initial GDT

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(outside service and expense record must be attached for any outside costs)

16:35 Finished collecting soil samples, will now collect water sample from decon water

16:50 Finished collecting water sample and cleaning up, now leaving site to deliver samples to lab. Sample # = 90310042

17:05 Dropped-off samples, now departing lab for HLA Novato office

18:00 Arrive back at HLA Novato office. Need to unload equip.

Attachments:

Initial GDT